Interdepartmental Memorandum CITY OF SAINT PAUL





TO: Merritt Clapp-Smith, Senior Planner, PED

FROM: Greg Reese, Parks & Recreation, Forestry

DATE: February 9, 2010

SUBJ: Follow up to yesterday's telephone conversation

Greetings, Merritt. I know your job crafting a code amendment is infinitely more difficult than mine in making recommendations germane to landscaping. I send the following comments as an adjunct to our telephone conversation yesterday.

- CU structural soil, Silva Cells, Carolina Stalite all only come into play if the goal is to create space for tree root growth beneath a <u>load-bearing</u> surface. Thus, if relatively small landscape beds or landscaping islands in the parking area are desired to be able to provide a maximum number of parking stalls, e.g. a landscape bed providing 100 cu. ft. of soil volume for root growth, structural soil can be used beneath the paved surface that will not only be load bearing but also allow roots to grow. The downside of this approach is cost. CU structural soil is about \$70.00 cu. yd. and Silva Cell technology is even more expensive, but tree benefit greatly from these interventions when they are necessary.
- The competition for space is always intense, like in the right of way, but it would be better to plant fewer trees, e.g., one shade tree for every 10 stalls of parking, providing suitable soil volumes than it would to plant lots of trees where they have no hope for vigor, vitality or maturity.
- I have seen models where landscaping and storm water management goals have been met by "carving out" suitable space for trees and rain water runoff to work synergistically together. In my opinion, having a designated area (s) like this that would meet watershed requirements <u>and</u> provide for mature trees, even if it meant fewer trees, would be better that planting lots of trees in spaces that will not support tree health.
- Earlier, I stated that, as a general rule, 20-25 square feet of open ground with uncompacted soil for each dbh inch is recommended. In open ground areas or load bearing areas with structural soil the more cubic feet of soil volume that is provided the greater the potential is for having healthy trees capable of reaching maturity. 1,000 cubic feet of suitable soil is pretty good, 500 cubic feet means smaller and shorter lived trees, 100 cu. ft. means the tree get's replaced every 5 years or so and never really provides the shade or aesthetics envisioned by the person who planted the tree.
- Flora, other than trees, can and is often incorporated to meet aesthetic goals. Of course, this flora cannot provide shade, it less competent in mitigating storm water run off, and of course, people love trees. The challenge is to fulfill the love with a thing of beauty not one of failed expectations.

Good luck in solving the "Gordian Knot," Merritt. If I can be of further assistance, I stand at the ready.

C" Cy Kosel Jody Martinez